

Algebra II Study Guide

For sections 5.1-5.4, study the quiz questions.
Cover up your answers & redo the problems.

5.5 Solve by synthetic or long division

Answers

① $(x^3 - x^2 + 4x - 10) \div (x + 2)$

$$x^2 - 3x + 10 \quad \frac{-30}{x+2}$$

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5.6 Find potential rational zeros

$\pm 1, \pm 2, \pm 5, \pm 10$

② $f(x) = x^3 - 4x^2 + x - 10$

pg 374 3, 5

Find all zeros:

③ $f(x) = x^3 - 12x^2 + 35x - 24$

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1, 3, 8

5.7 Find all zeros

④ $f(x) = x^4 + 4x^3 + 7x^2 + 16x + 12$

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$-3, -1, 2i, -2i$

⑤ Write a polynomial function
zeros: $-1, 2, -3i$

pg 384 23, 27

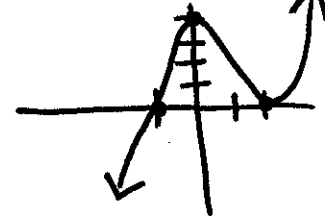
$$f(x) = (x+1)(x-2)(x+3i)(x-3i)$$

5.8 Graph the function & find local max & local min.

⑥ $f(x) = (x-2)^2(x+1)$

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⑦ Word problem ↗



max: (0, 4)
min: (2, 0)

5.9 Write the cubic function through
(-4, 0) (0, -6) (1, 0) (3, 0)

$$y = -\frac{1}{3}(x+4)(x-1)(x-3)$$

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